

Amendments To The Claims:

Claims 1-11 are pending in the application.

Please cancel claims 3 and 4 and amend claims 1, 6-8 and 11 as follows:

1. (Currently amended) A polishing composition for use in polishing for forming wiring in a semiconductor device, the polishing composition comprising:

colloidal silica, wherein the colloidal silica includes a first colloidal silica having an average particle size of 0.05 μm or more and 0.3 μm or less, and a second colloidal silica having an average particle size of 0.01 μm or more and less than 0.05 μm , and the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is 1/6 to 5/2,

an acid,

an anticorrosive,

a completely saponified polyvinyl alcohol having a saponification degree of 98.0% by mole or more, and

water.

2. (Previously presented) The polishing composition according to Claim 1, further comprising an oxidizing agent.

3. (Canceled)

4. (Canceled)

5. (Previously presented) The polishing composition according to Claim 1, wherein the acid includes at least one kind selected from nitric acid, hydrochloric acid, sulfuric acid, lactic acid, acetic acid, oxalic acid, citric acid, malic acid, succinic acid, butyric acid and malonic acid.

6. (Withdrawn - Currently amended) A method for polishing an object to form wiring in a semiconductor device, the method comprising:

preparing a polishing composition including:

colloidal silica, wherein the colloidal silica includes a first colloidal silica having an average particle size of 0.05 μm or more and 0.3 μm or less, and a second colloidal silica having an average particle size of 0.01 μm or more and less than 0.05 μm , and the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is 1/6 to 5/2,

an acid,

an anticorrosive,

a completely saponified polyvinyl alcohol having a saponification degree of 98.0% by mole or more, and

water; and

using the polishing composition to polish the object to form wiring.

7. (Withdrawn - Currently amended) A method for polishing an object to form wiring in a semiconductor device, wherein the object has a barrier layer and a conductive layer in this order on an insulating layer having a trench, and the barrier layer and the conductive layer have a portion positioned outside the trench and a portion positioned inside the trench, respectively, the method comprising:

preparing a polishing composition including:

colloidal silica, wherein the colloidal silica includes a first colloidal silica having an average particle size of 0.05 μm or more and 0.3 μm or less, and a second colloidal silica having an average particle size of 0.01 μm or more and less than 0.05 μm , and the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is 1/6 to 5/2,

an acid,

an anticorrosive,

a completely saponified polyvinyl alcohol having a saponification degree of 98.0% by mole or more, and

water; and

removing the portion of the conductive layer positioned outside the trench and the portion

of the barrier layer positioned outside the trench by chemical mechanical polishing using the polishing composition to expose an upper surface of the insulating layer.

8. (Withdrawn - Currently amended) A method for polishing an object to form wiring in a semiconductor device, wherein the object has a barrier layer and a conductive layer in this order on an insulating layer having a trench, and the barrier layer and the conductive layer have a portion positioned outside the trench and a portion positioned inside the trench, respectively, the method comprising:

removing a part of the portion of the conductive layer positioned outside the trench by chemical mechanical polishing to expose an upper surface of the barrier layer, and

removing the remaining part of the portion of the conductive layer positioned outside the trench and the portion of the barrier layer positioned outside the trench by chemical mechanical polishing to expose an upper surface of the insulating layer,

wherein a first polishing composition is used in the chemical mechanical polishing to remove a part of the portion of the conductive layer positioned outside the trench, and a second polishing composition is used in the chemical mechanical polishing to remove the remaining part of the portion of the conductive layer positioned outside the trench and the portion of the barrier layer positioned outside the trench, and

the first polishing composition includes a surfactant, a silicon oxide, a carboxylic acid, an anticorrosive, an oxidizing agent and water, the surfactant including at least one kind selected from the compounds represented by general formulae (1) to (7) below and salts thereof;

in the general formula (1), R^1 represents an alkyl group having 8 to 16 carbon atoms, R^2 represents a hydrogen atom, a methyl group, or an ethyl group, R^3 represents an alkylene group having 1 to 8 carbon atoms, $-(CH_2CH_2O)_l-$, $-(CH_2CH(CH_3)O)_m-$, or a combination of at least two kinds thereof, when R^3 represents $-(CH_2CH_2O)_l-$ or $-(CH_2CH(CH_3)O)_m-$, l and m are an integer of 1 to 8, when R^3 represents the combination of $-(CH_2CH_2O)_l-$ and $-(CH_2CH(CH_3)O)_m-$, the sum of l and m is an integer of 8 or less, X^1 represents a carboxyl group or a sulfone group;

in the general formulae (2) and (3), R^4 represents an alkyl group having 8 to 16 carbon atoms, Z is a functional group represented by the chemical formula (i) or (ii) below, Y^1 represents $-(CH_2CH_2O)_n-$, $-(CH_2CH(CH_3)O)_p-$, or a combination of $-(CH_2CH_2O)_n-$ and $-(CH_2CH(CH_3)O)_p-$,

when Y^1 represents $-(CH_2CH_2O)_n-$ or $-(CH_2CH(CH_3)O)_p-$, n and p are an integer of 1 to 6, when Y^1 represents the combination of $-(CH_2CH_2O)_n-$ and $-(CH_2CH(CH_3)O)_p-$, sum of n and p is an integer of 6 or less, X^2 represents a phosphoric acid group or a sulfone group; and

in the general formulae (4) to (7), each of R^5 and R^6 represents a hydrogen atom, a hydroxyl group, or an alkyl group having 8 to 16 carbon atoms, each of Y^2 and Y^3 represents $-(CH_2CH_2O)_q-$, $-(CH_2CH(CH_3)O)_r-$, or a combination of $-(CH_2CH_2O)_q-$ and $-(CH_2CH(CH_3)O)_r-$, when Y^2 or Y^3 represents $-(CH_2CH_2O)_q-$ or $-(CH_2CH(CH_3)O)_r-$, q and r are an integer of 1 to 6, when Y^2 or Y^3 represents the combination of $-(CH_2CH_2O)_q-$ and $-(CH_2CH(CH_3)O)_r-$, the sum of q and r is an integer of 6 or less, and

the second polishing composition includes:

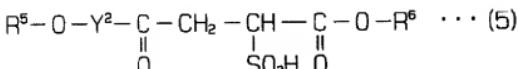
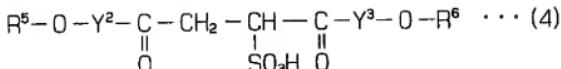
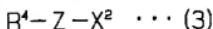
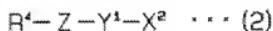
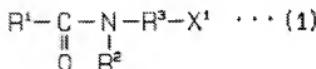
colloidal silica, wherein the colloidal silica includes a first colloidal silica having an average particle size of 0.05 μm or more and 0.3 μm or less, and a second colloidal silica having an average particle size of 0.01 μm or more and less than 0.05 μm , and the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is 1/6 to 5/2,

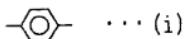
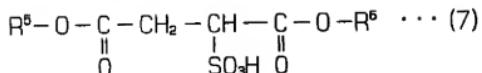
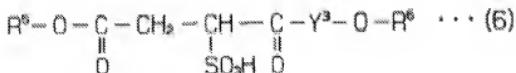
an acid,

an anticorrosive,

a completely saponified polyvinyl alcohol having a saponification degree of 98.0% by mole or more, and

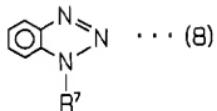
water, and general formulae (1) to (7), (i) and (ii) are as follows:





9. (Withdrawn) The method according to Claim 8, wherein the carboxylic acid in the first polishing composition is an α -amino acid.

10. (Withdrawn) The method according to Claim 8, wherein the anticorrosive in the first polishing composition is a benzotriazole derivative represented by general formula (8):



in the general formula (8), R⁷ represents an alkyl group having a carboxyl group, an alkyl group having a hydroxyl group and a tertiary amino group, an alkyl group having a hydroxy group, or an alkyl group other than those.

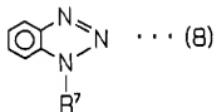
11. (Withdrawn - Currently amended) A method for polishing an object to form wiring in a semiconductor device, wherein the object has a barrier layer and a conductive layer in this order on an insulating layer having a trench, and the barrier layer and the conductive layer have a portion positioned outside the trench and a portion positioned inside the trench, respectively, the method comprising:

removing a part of the portion of the conductive layer positioned outside the trench by chemical mechanical polishing to expose an upper surface of the barrier layer, and

removing the remaining part of the portion of the conductive layer positioned outside the trench and the portion of the barrier layer positioned outside the trench by chemical mechanical polishing to expose an upper surface of the insulating layer,

wherein a first polishing composition is used in the chemical mechanical polishing to remove a part of the portion of the conductive layer positioned outside the trench, and a second polishing composition is used in the chemical mechanical polishing to remove the remaining part of the portion of the conductive layer positioned outside the trench and the portion of the barrier layer positioned outside the trench,

the first polishing composition includes an α -amino acid, a benzotriazole derivative, a silicon oxide, a surfactant, an oxidizing agent and water, the benzotriazole derivative is represented by general formula (8):



in the general formula (8), R⁷ represents an alkyl group having a carboxyl group, an alkyl group having a hydroxyl group and a tertiary amino group, an alkyl group having a hydroxyl group, or an alkyl group other than those, and

the second polishing composition includes:

colloidal silica, wherein the colloidal silica includes a first colloidal silica having an average particle size of 0.05 μm or more and 0.3 μm or less, and a second colloidal silica having an average particle size of 0.01 μm or more and less than 0.05 μm , and the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is 1/6 to 5/2,

an acid,

an anticorrosive,

a completely saponified polyvinyl alcohol having a saponification degree of 98.0% by mole or more, and

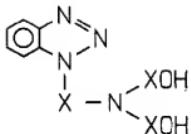
water.

Please add new claims 12 to 18 as follows:

12. (New) The polishing composition according to Claim 1, wherein the ratio of the amount by mass of the first colloidal silica to the amount by mass of the second colloidal silica is about 2/5.

13. (New) The polishing composition according to Claim 1, wherein the amount of the first colloidal silica is 1 to 7% by mass, and the amount of the second colloidal silica is 2 to 10% by mass.

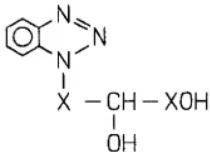
14. (New) The polishing composition according to Claim 1, wherein the anticorrosive is a compound represented by the following formula:



wherein X represents an alkylene group.

15. (New) The polishing composition according to Claim 14, wherein the anticorrosive is 1-[N,N-bis(hydroxymethyl)aminomethyl]-benzotriazole.

16. (New) The polishing composition according to Claim 1, wherein the anticorrosive is a compound represented by the following formula:



wherein X represents an alkylene group.

17. (New) The polishing composition according to Claim 16, wherein the anticorrosive is 1-(2,3-

dihydroxypropyl)benzotriazole.

18. (New) The polishing composition according to Claim 5, wherein the acid includes sulfuric acid.